We claim:

1. A storage management system comprising a volume provider to map a logical storage volume onto one or more storage devices of a storage subsystem, wherein the volume provider presents an application programming interface (API) for receiving storage access information that characterizes behavioral attributes of the storage volume.

2. The storage management system of claim 1 wherein the attributes includes data availability desires including a desired level of fault tolerance.

3. The storage management system of claim 1 wherein the attributes include intended input/output patterns for accessing the storage volume.

4. The storage management system of claim 3 wherein the access patterns indicate whether the volume is primarily intended for sequential reads and sequential writes.

5. The storage management system of claim 1 wherein the attributes include optimization preferences.

6. The storage management system of claim 1 wherein the volume provider configures the storage volume as a function of the storage access information.

7. The storage management system of claim 1 and further including a software application executing on a computer within the storage subsystem, wherein the software application issues the storage access information to the volume provider.

8. The storage management system of claim 7 wherein the application is an administrative tool that issues the storage access information to the volume provider in response to input from an administrator.

9. The storage management system of claim 3 wherein the volume provider monitors actual access patterns and reconfigures the volume in response to changes in the actual access patterns and the intended access patterns.

10. The storage management system of claim 1, wherein the API conforms to a Component Object Model (COM) interface.

11. A method for managing one or more storage volumes of a storage subsystem comprising:

receiving via an application programming interface (API) storage access information that characterizes volume behavioral attributes of one or more storage volumes; and

configuring one or more storage volumes of a storage subsystem as a function of the storage access information.

12. The method of claim 11 wherein receiving storage access information includes receiving data availability desires including a preferred level of fault tolerance.

13. The method of claim 11 wherein receiving storage access information includes receiving intended access patterns.

14. The method of claim 13 wherein receiving the intended access patterns includes receiving whether a volume is primarily intended for sequential reads or sequential writes.

15. The method of claim 11 wherein receiving storage access information includes receiving configuration parameters including a request size

16. The method of claim 11 wherein receiving storage access information includes receiving optimization parameters.

17. The method of claim 16 and further including monitoring accesses of the configured storage volumes by the software application.

18. The method of claim 16 and further including reconfiguring the storage volumes based on the monitored accesses and the received storage access information.

19. The method of claim 11 wherein configuring includes resolving conflicts within the storage access information.

20. The method of claim 11, wherein receiving the storage access information includes receiving the storage access information via the application programming interface (API) that conforms to a Component Object Model (COM) interface.

21. A computer-readable medium having computer-executable instructions to cause a computer to perform a method of:

receiving via an application programming interface (API) storage access information that communicates volume behavioral attributes of one or more storage volumes; and

configuring one or more storage volumes of a storage subsystem as a function of the storage access information.

22. The computer-readable medium of claim 21 further including computer-executable instructions to cause the computer to further perform the method:

monitoring accesses of the configured storage volumes by the software application; and

reconfiguring the storage volumes based on the accesses and the received storage access information.

23. A set of application program interfaces embodied on a computer-readable medium for execution on a computer in conjunction with a software application, comprising a first interface to receive storage access information that communicates behavioral attributes of one or more storage volumes and to configure one or more of the storage volumes of a storage subsystem as a function of the storage access information.

24. The application programming interface of claim 23 further comprising a second interface to receive data availability desires including a preferred level of fault tolerance.

25. The application programming interface of claim 24 wherein the second interface receives parameters characterizing intended access patterns for the storage volumes.

26. The application programming interface of claim 25 wherein the second interface receives parameters characterizing the intended access patterns as primarily intended for sequential reads or sequential writes.

27. The application programming interface of claim 23 and further comprising a third interface to receive optimization parameters.

28. The application programming interface of claim 23 wherein the application

programming interface (API) conforms to a Component Object Model (COM) interface.